Pat PM
Peter
Ray RLS

MONITOR WELL PRE-SPUD PROPOSAL

1) WELL NAME/NUMBER: BLM-22

2) PROPOSED LOCATION: (a) General (on or off-site) Off-site

(attach map Site Area BLM Land

(b) Sect 33 Twnshp 20S Rng 3E NW ¼ SW ¼ NW ¼ SE ¼

3) WELL PARAMETERS:

(a) Est. total depth 500 (ft) (b) Est. ground elevation 4584 ft

(c) Anticipated stratigraphy:

Alluvium (Santa Fe Group) from 0 ' to 355 ' (depth)

Tuff (Cueva?) from 355 ' to TD ' (depth)

(d) Anticipated water bearing horizon(s):

Tuff at 470 ' (depth)

_____ at _____ ' (depth)

(e) Anticipated static water level 360 ' (depth)

4) WELL PURPOSE/JUSTIFICATION (attach maps and table if needed):

To determine internal plume characteristics in the shallow aquifer west of the facility boundary (west of the 300/400 area).

5) PROPOSED DRILLING PARAMETERS:

(a) Drilling method(s): (air/foam/mud rotary/auger/etc.)

Mud rotary from 0 ' to 100 ' (max)

Air foam rotary from 100 ' to TD ' (depth)

Air-foam method: "Quik-Foam" surfactant/water mixture used in conjunction with filtered compress air.

Mud-rotary method: Bentonite mud/water mixture.

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(b) Lithology sampling - collect sample every:

5' intervals Method Grab from 0 ' to TD ' (depth)
Core type 6" Dennison from ' to ' (depth)
2" Christiansen from 470 ' to 480' (depth) if needed

(c) Anticipated drilling additive(s): E-Z mud

7) PROPOSED WELL COMPLETION DESIGN/MATERIALS

(a) Casing:	Material	Diameter	From	To	Comments
Temporary					
Surface		10"	0	100' max	
Screen (10')	stainless ++	4"	determine from geophysical logs		
Completion Pipe	stainless +	4"	0	TD	*

Standard material: Blank riser, silt trap, locking cap

N/A Data not available at this time
* for deep completions (450 feet or more)
** for shallow completions
\+ Type 304, Schedule 5 stainless steel
Type 304, Schedule 10 stainless steel
++ Regular strength screen, extra strength screen used below 450 feet

(b) Filter pack: Standard 8/20 and 16/40 sand and bentonite plug(s), grout to surface.

8) PROPOSED WELL DEVELOPMENT

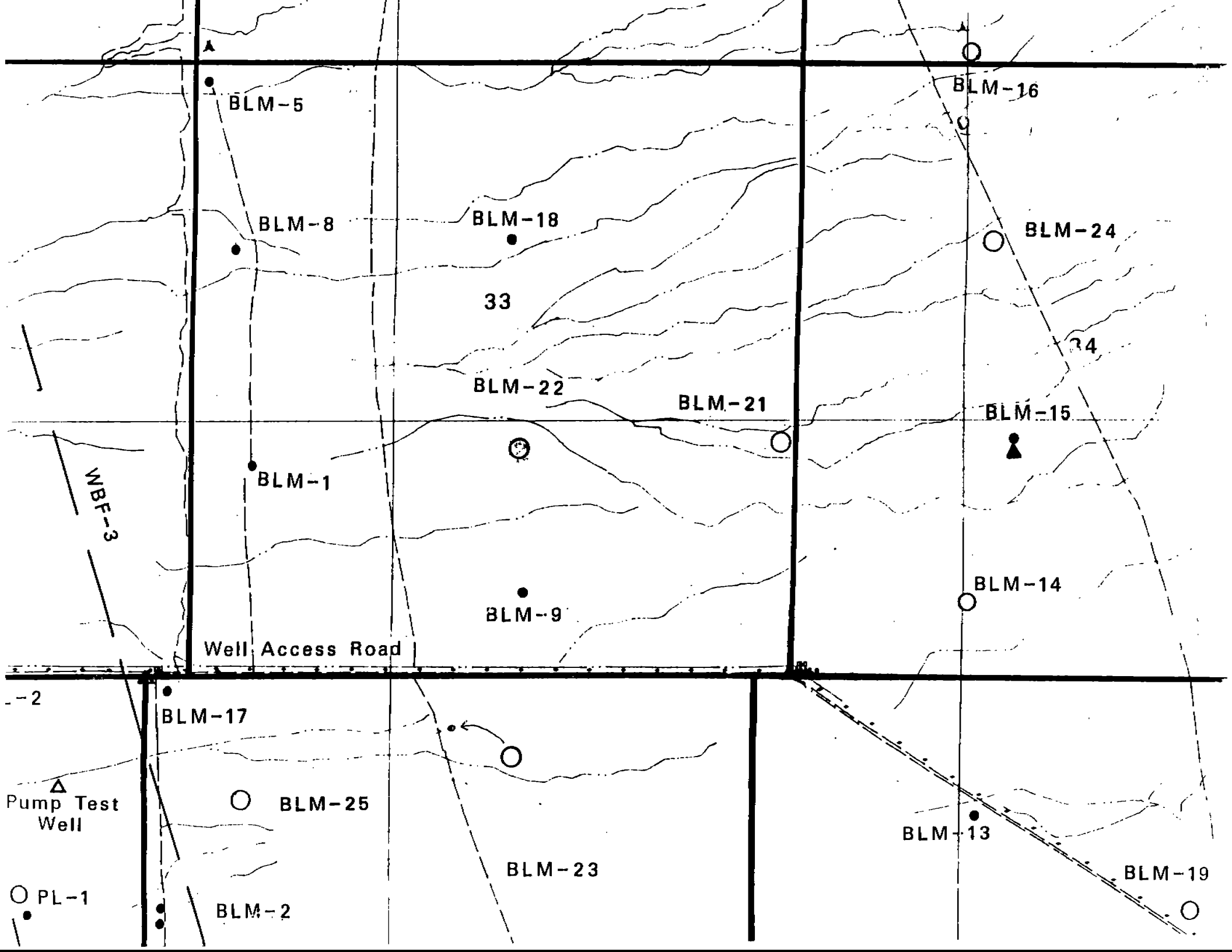
(a) Surge and bail with surge block and bailer.

(b) Pump with submersible pump until parameters stabilize.

9) WELL AUTHORIZATION

(a) Proposed by Geoscience Consultants, Ltd.

(b) Authorized Robert Mitchell (name) NASA (representing) Robert E. Mitchell (signature)


BLM-5
BLM-16
BLM-8
BLM-18
BLM-24
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BLM-22
BLM-21
BLM-15
BLM-1
WBF-3
BLM-14
BLM-9
Well Access Road
BLM-17
Pump Test Well
BLM-25
BLM-13
BLM-23
BLM-19
PL-1
BLM-2